National Institute of Child Health and Human Development/NIH

Goal #3 of the Secretary's Mathematics Initiative: Supporting High-Quality Research

Activities sponsored by the NICHD pursuant to Goal # 3:

In an effort to meet the goal of supporting high-quality research in mathematics learning, the NICHD has developed a new program: Mathematics and Science Cognition and Learning – Development and Disorders. The overall goal of the various activities that will fall under the rubric of this program is to attract and fund rigorous, scientifically-based research in mathematical cognition and learning that will have significant implications for the improvement of instructional practices. To this end, a variety of activities are currently underway:

1. A new Request for Applications was released in December 2002, co-sponsored by the Office of Special Education and Rehabilitative Services (OSERS), U.S. Department of Education, announcing a new competition entitled "Mathematics Cognition and Specific Learning Disabilities." This request invites innovative research grant applications designed to contribute new knowledge in the area of mathematical cognition and learning, with a focus on: a) the discovery of cognitive, perceptual, behavioral, genetic, hormonal, and neurobiological mechanisms that are influential in the expression of learning abilities, b) the role of individual differences in the development of mathematical proficiency (e.g., gender, sociocultural factors, SES), and c) specific learning disabilities in mathematics including definitional elements, classification, epidemiology, preventive strategies, early intervention, etiology, diagnosis, and treatment. The deadline for receipt of applications is March 28, 2003. Notice of funding will be made by the end of September 2003. These studies will take from 3 to 5 years to complete.

2. Another effort to support high quality research in mathematics learning is the Interagency Education Research Initiative (IERI). NICHD is partnering with the Institute of Education Sciences in the U. S. Department of Education, and the National Science Foundation to fund scientific research that investigates the effectiveness of educational interventions in mathematics, the sciences, and reading, as they are implemented in varied school settings with diverse student populations. From an empirical perspective, the aim of IERI is to identify conditions under which effective evidence-based interventions to improve preK-12 student learning and achievement succeed when applied on a large scale. Applications must be received by March 14, 2003. Awards will be announced in August 2003.

3. NICHD has recently joined the Numeracy Working Group of the Organization for Economic Cooperation and Development as part of an international effort to explore the implications of advances in cognitive neuroscience research for educational practices in the area of mathematics. This is an ongoing effort that has been partially funded by the National Science Foundation.